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PATENT DEPARTMENT
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EXAMINER

MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,222

Applicant(s)

KOHLER ET AL.

Examiner

Sanza L McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 11-18 is/are rejected.
- 7) ☒ Claim(s) 4 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7/26/03.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 16 provides for the use of an aqueous suspension, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 16 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

4. Claim 17 provides for the use of a composition, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is

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indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-6, 8-9, 11-15, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Li Bassi et al (EP 0 386 650 A2 and US 5,168,087). Note: column and line and/or page information is taken from EP 0 386 650 A2).

Li Bassi et al teaches aqueous dispersion systems of photoinitiators. Said systems comprise a photoinitiator and a surface acting agent. In addition, said systems can be comprise a stabilizing agent and various auxiliaries, such as antifoaming agents, degassers, antibacterial agents, antimold agents, thermic stabilizers, spreaders, coalescence auxiliaries, pigments, and photostabilizers. Said antimold agents and antibacterial agents appear to anticipate claim 8 and the photostabilizers appear to anticipate

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claim 9. Said surface acting agents can comprise sulphonic acids and their salts and other listed on page 4. Said stabilizers can include polymers and copolymers of acrylic and methacrylic acid, maleic anhydride, polyvinylalcohol, ionic and non-ionic derivatives of cellulose and natural polysacharrides, such as xanthanes and its derivatives. This appears to anticipate claim 6. The photoinitiator can be found in amounts from, preferably, 30 to 80% by weight, said stabilizer can be found in amounts from 0.1 to 2% by weight, and said surface acting agents can be found in amounts from 0.5 to 2% by weight, wherein all components are then dispersed in water to obtain said dispersion system. This appears to anticipate claim 5. Li Bassi et al teaches that said photoinitiator suitable for use in said dispersion can comprise mono- and/or di-acylphosphine oxide, in addition, to many commercially available products, such as the Irgacure and Darocure series sold by Ciba and Merck. Per example 10, Li Bassi et al teaches using 2,4,6-trimethylbenzoyl diphenylphosphine oxide in a photoinitiator dispersion. This appears to anticipate claims 1-3.

Per examples 5-10, Li Bassi et al teaches photopolymerizing an ethylenically unsaturated compound in the presence of the photoinitiator dispersions taught by Li Bassi using an 80W ultraviolet lamp. This appears to anticipate claims 11-12 and 14. Per example 8, Li Bassi et al teaches a water-bourne paint formulation comprising a pigment formulation, an ethylenically unsaturated polymer, and an aqueous photoinitiator dispersion as described above and coating onto a cement panel. This appears to anticipate claims 13, 15, and 18.

Claim Rejections - 35 USC § 102/ 35 USC § 103

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 7 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Li Bassi et al (EP 0 386 650 A2 and US 5,168,087) taken with teaching reference. Note the column and line and/or page information is taken from the EP reference and the teaching reference is a Ciba additives brochure.

Li Bassi et al does not expressly teach using a di-acylphosphine oxide photoinitiator in said dispersion, however Li Bassi et al teaches using commercially available photoinitiators, such as the Irgacure series. Ciba additives brochure teaches that the Irgacure series has a product called Irgacure 1700, which is a commercially available di-acylphosphine oxide, which

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is Bis (2,6-dimethoxybenzoyl)-2,4,4-trimethylpentyl phosphine oxide. Therefore, it would have been obvious for a skilled artisan to produce a stable photoinitiators system comprising a di-acylphosphine oxide, such as bis (2,6-dimethoxybenzoyl)-2,4,4-trimethylpentyl phosphine oxide, for photopolymerizing aqueous compositions using actinic radiation. The motivation would have been to diminish the toxicity and odor problems associated with similar type compositions that use organic solvents with the expectation of adequate success as taught by Li Bassi et al. Conversely, in the alternative, the teachings of using commercially available photoinitiators of the Irgacure series, which include bis (2,6-dimethoxybenzoyl)-2,4,4-trimethylpentyl phosphine oxide (Irgacure 1700), which appears anticipate the general formula found in claim 7, is inherent to the disclosure of Li Bassi et al, and therefore anticipates claim 7.

Allowable Subject Matter

10. Claims 4 and 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art fail to teach the process steps 2 and 3 as defined in claim 10 in a process for preparing an aqueous storage-stable non-sedimenting photoinitiators suspension. Additionally, the prior art fails to teach an aqueous storage-stable non-sedimenting suspension wherein the particle size of the solid(s) is from 0.1 μm to 12 μm , especially from 0.1 μm to 4 μm .

Conclusion

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L McClendon whose telephone number is (703) 305-0505. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0657.

Sanza L McClendon

Examiner

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SMc


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700